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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,321	06/29/2001	Preston J. Hunt	42390P11147	8383

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EXAMINER

POLTORAK, PIOTR

ART UNIT	PAPER NUMBER
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2134

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/896,321

Applicant(s)

HUNT ET AL.

Examiner

Peter Poltorak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 7, 10-12 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-7, 10-12 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The Amendment, and remarks therein, received on 3/05/07 have been entered and carefully considered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

Response to Amendment

3. Applicant argues that the examiner failed to provide proper support for the outstanding rejections. Specifically applicant suggests that paragraph 6 and 7 of the background section of Margolus does not support "prior to synchronizing the client files with the server files, matching client file contents from the client message digests with server file contents from the server message digests to determine whether the client files and the server files are to be synchronized".
4. Carefully considered applicant argument was not found persuasive. The examiner points to Margolus, who clearly discloses a digital fingerprint of a file called a message digest ("*Use of network storage is also encouraged by techniques which speed up network file transfers. One such technique involves the concept of a 'digital fingerprint' of a file, also called a 'hash function' a 'content signature' or a 'message digest' ...*" [0006]). Margolus discloses that prior to synchronizing the client files with the server files ("*Fingerprints have also been used for many years to avoid unnecessary file transfers. One application of this sort has been in Bulletin Board Systems (BBSs) ... client computer wishing to store data into the BBS can compute the fingerprint of the file that it wishes to send, and send that first*" [0007]),

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matching client file contents from the client message digests with server file contents from the server message digests to determine whether the client files and the server files are to be synchronized (*"BBS maintain a table of fingerprints for all files already present ... a client computer wishing to store data into the BBS can compute the fingerprint of the file that it wishes to send, and send that first. If a file containing this data is already present in the BBS, then the client is informed and need not send anything."* [0007]).

5. Applicant acknowledged the 35 U.S.C. 112, first and second paragraph rejection regarding claim 3. However, applicant did not provide clarification of the claim language. As a result, claim 3 continues to be addressed as best understood.
6. Claims 1-4, 6-7, 10-12 and 20 have been examined.

Claim Rejections - 35 USC § 112

7. Claim 3 remains rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It is not clear how one would add server file contents that are missing on the server to the client. Another words, it is not clear how, as suggested by the amended limitation, a file that a server does not have is added to a client during the client/server synchronization.

8. Claim 3 remains rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. As indicated above, the limitations of claim 3 is not clear. If there are no limitation missing (e.g. there are some other clients/servers that take part in the client/server synchronization) than it is not clear from where the client obtains the missing server file. As a result the metes and bounds of the claim limitation cannot be ascertained. For purposes of further examination claim 3 is treated as best understood.

Claim Rejections - 35 USC 103

9. Claims 1-2, 4, 6, 10-12, 20 remain rejected under 35 U.S.C. 103(a) as obvious over Midgely (U.S. Patent No. 6571245) in view of Margolus (U.S. Pub. No. 20040143743).

Huang discloses a network synchronization of a client/server files (Fig. 8 and col. 11 line 62-col. 12 line 9).

10. *Huang does not disclose generation of client message digests and server message digest corresponding to client and server file contents respectively and as a result, Furthermore, Hunag does not disclose synchronizing the client files and the server files if the client file contents and the server file contents do not match.*

Margolus teaches generating, prior to synchronization, client message digests corresponding to client files, and generating client message digests corresponding to server files and using the message digests to determine whether to synchronize a client and a server (Margolus, [6-7]). In particular, Margolus discloses the benefit of

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matching client file content and server client content using message digest to avoid synchronizing the client files and the server files if the client file content and the server file content match (Margolus, [7]).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include generating, prior to synchronization, client message digests corresponding to client files, and generating client message digests corresponding to server files and using the message digests to determine whether to synchronize a client and a server as disclosed by Margolus. One of ordinary skill in the art would have been motivated to perform such a modification in order to avoid unnecessary transmission and duplicate-storage of files.

Since introducing Margolus' invention would alleviate only the problem of transfer duplicate client/server files, synchronizing the client files and the server files, if the client files contents and the server file contents do not match would be necessary in order to successfully accomplish client/server file synchronization taught by Huang.

11. As per claim 2, the ordinary artisan would recognize that new files are frequently created on client (and a server) and, as a result, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to add client file contents that are missing on the server to the server given the benefit of including new files in synchronization process.
12. Claims 10 and 20 are substantially equivalent to claim 1; therefore claim 10 and 20 are similarly rejected.

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13. As per claims 4, 6 and 11-12, the message digests, such as the cryptographic hash comprising 128-160 bits (Margolus, SHA-1 [59]), uniquely identifies the corresponding file (Margolus, [6]).

14. Claims 7 remains rejected under 35 U.S.C. 103(a) as obvious over Midgely (U.S. Patent No. 6571245) in view of Margolus (U.S. Pub. No. 20040143743) and further in view of Chan (U.S. Patent No. 6748538) or alternatively in further view of Bolosky (U.S. Pub. No. 20020194484).

The disclosed above Midgely in view of Margolus present generating cryptographic hashes (message digests) to content of the client files.

15. *Midgely in view of Margolus do not disclose combining the message digests into a single message digest.*

Chan teaches combining the message digests into a single client message digest (Chan, col. 3 line 45- col. 4 line 7).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to combine message digests into a single message given the benefit of ensuring the integrity of the message digests.

Similarly, Bolosky discloses combining the message digests into a single client message digests (manifest, Bolosky, [7]).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to combine message digests into a single message given the benefit of a increased efficiency of evaluating multiple digests.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Poltorak whose telephone number is (571) 272-3840. The examiner can normally be reached Monday through Thursday from 9:00 a.m. to 4:00 p.m. and alternate Fridays from 9:00 a.m. to 3:30 p.m.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



3/29/07



KAMBIZ ZAND
PRIMARY EXAMINER